

FORAGE SUITABILITY GROUP

Loamy “LRU P” (AWC > 6")
> 20” ppt & > 120 Freeze Free Days

FSG No.: GO62XP017WY

Major Land Resource Area (MLRA) : 62 – Black Hills

Physiographic Features

Most of this area is in the Black Hills National Forest. The elevation ranges from 3,609 to 6,562 feet (1,100 to 2,000 m) but it is 7,218 feet (2,200 m) on Harney Peak. The Black Hills area is an important tourist attraction, is used for mining, recreation, and hunting. Small farms and ranches, rural homes, and summer homes on small acreages are scattered throughout the area. Some timber is harvested. The small farms and ranches depend on the Black Hills National Forest for summer grazing. Slopes range from moderate on some of the high plateaus to very steep along drainageways and on peaks and ridges. The narrow valleys are mostly gently sloping to strongly sloping.

Climatic Features

Annual precipitation ranges from 18 - 26 inches per year (450 to 650 mm per year). Precipitation in the winter is mostly snow that ranges from about 59 inches (150 cm) at the lower elevations to as much as 142 inches (360 cm) at the higher elevations. Precipitation, perennial streams, springs, and shallow wells provide adequate water for domestic use.

This is in Land Resource Area “P”. The precipitation in this LRU is greater than 20 inches and has a freeze free period greater than 120 days.

There is a wide variation in freeze free days and precipitation in this MLRA. Please be sure and visit with the local field office for site specific climatic information that is available in the Field Office Technical Guide, Section I, Climatic Data, <http://www.nrcs.usda.gov/technical/efotg/> or refer to the National Water and Climate Center web page at <http://www.wcc.nrcs.usda.gov>.

Soil Interpretations

This group consists of deep, medium textured soils. The loam soils tend to be mellow and are easily worked, and have a pore-size distribution that results in good water retention and aeration. These soils have a water holding capacity (AWC) of greater than 6 inches in 60 inches of root depth. They have few limitations for the management and growth of adapted plants. The permeability class ranges from slow to moderately rapid.

The soil survey maps were completed for the purposes of developing plans for tracts of land and can not be used to determine the soils on or the suitability of a specific site. Consequently, small areas of significantly different soils are not identified on the maps and may occur in any map unit.

Refer to Appendix A, Forage Suitability Group Rules in Section II, of the Field Office Technical Guide, Pastureland and Hayland Interpretations for the parameters used in grouping the soils.

Soil Map Unit List

For a complete listing of soil components and what Forage Suitability Group the soil is in, refer to Appendix B, Section II of the Field Office Technical Guide, Pastureland and Hayland Interpretations.

Adapted Species List

Refer to Appendix C, Adapted Species for Forage Suitability Groups in Section II of the Field Office Technical Guide, Pastureland and Hayland Interpretations. Additional information concerning plant characteristics of a number of the listed species as well as individual cultivars of many of those species can be accessed on the web at <http://www.plants.usda.gov>.

Production Estimates

Production estimates are based on management intensity (fertility regime, irrigation water management, harvest timing, etc.) and should be considered as estimates only. The estimates should only be used for making general management recommendations. On site production information should always be used for making detailed planning and management recommendations when available.

The high forage production estimates listed below are based on dense, vigorous stands of climatically adapted, superior performing cultivars. They are properly fertilized for high yields, and pest infestations are kept below economic thresholds. Mechanical harvests are managed to maintain stand life by cutting at appropriate stages of maturity and harvest intervals. If grazed, optimum beginning and ending grazing heights are adhered to. Adequate time is allowed for plant recovery before entering winter dormancy under both uses.

The production estimates listed below represent total annual above ground plant production on an air-dry-matter basis. Production on pastures in many instances is species dependent and depends if the pasture is a single species pasture or a mixture of grass species. To convert the information below to AUM's (Animal Unit Months), multiply the pounds per acre by 35 per cent and then divide by 790 (example: assume 2,800 pounds per acre: $2,800 \times .35 \div 790 = 1\frac{1}{4}$ AUM's).

Irrigation: The expected production for grass would be from 3,000 to 6,000 pounds per acre. The expected production for legumes would range from 6 to 8 tons per acre.

Dryland: The expected production for grass would be from 1,800 to 3,000 pounds per acre. The expected production for legumes would range from 5 to 6 tons per acre.

Forage Growth Curves

LRU P

Growth Curve Number: WY0001
Growth Curve Name: Cool Season Grass
Growth Curve Description: Dryland (> 20" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0							0	0	0

Growth Curve Number: WY0002
Growth Curve Name: Cool Season Grass
Growth Curve Description: Irrigated (> 20" precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0							0	0	0

Growth Curve Number: WY0010
Growth Curve Name: Legumes
Growth Curve Description: Irrigated (15 – 19” precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	20	20	20	20	10	5	0	0

Growth Curve Number: WY0011
Growth Curve Name: Legumes/Cool Season Grass
Growth Curve Description: Irrigated (15 – 19” precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	10	30	20	10	15	10	5	0	0

Growth Curve Number: WY0014
Growth Curve Name: Legumes
Growth Curve Description: Dryland 1 cutting (15 – 19” precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	25	25	15	20	10	0	0	0

Growth Curve Number: WY0015
Growth Curve Name: Legumes
Growth Curve Description: Dryland 2 cuttings (15 – 19” precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	20	25	15	25	10	0	0	0

Growth Curve Number: WY0004
Growth Curve Name: Legumes/Cool Season Grass
Growth Curve Description: Dryland (15 – 19” precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	10	35	25	15	5	10	0	0	0

Growth Curve Number: WY0005
Growth Curve Name: Warm Season Grass
Growth Curve Description: Dryland (> 20” precipitation)

Percent Production by Month

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0		10	40	35	15		0	0	0

Management

The relationship between soils, vegetation and climate on any given site is historically driven by the ability of the plants to grow and change as conditions warrant and has allowed various species to express themselves naturally. Under agronomic conditions, production-enhancing practices have altered the original limits of the biomass production. The modification of growth factors, customized selection of species and wise use of a variety of management practices have the potential to produce yields and quality far superior to those found in the native state.

These soils when in forage management system should see organic matter at a steady or a slowly climbing state. If erosion from either wind or water is a concern, the current erosion prediction tool should be used to ensure that the erosion concern is addressed properly. Refer to the pasture and hayland planting standard or the forage harvest standard in the Field Office Technical Guide, Section IV for further management information.

FSG Documentation

Data References:

Agriculture Handbook 296 - Land Resource Regions and Major Land Resource Areas
Natural Resources Conservation Service, National Water and Climate Center (NWCC)
National Soil Survey Center, National Soil Information System (NASIS)
National Range and Pasture Handbook
Natural Resources Conservation Service, Field Office Technical Guide (FOTG)
Various Agriculture Research Service (ARS), Cooperative Extension Service (CES), and Natural Resources Conservation Service (NRCS) information on plant trials for adaptation and production.
"Dryland Pastures in Montana and Wyoming" Species and Cultivars, Seeding Techniques and Grazing Management, Montana State University, EB19

State Correlation:

This site has been correlated with the following states:

Forage Suitability Group Approval:

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<u>Original Date:</u>	8/27/02
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